FB04
Department of Information Technology – Capital

Capital Budget Summary

Total Authorizations and Appropriations
($ in Millions)

	FY 2012 Approp.	*FY 2013 Approp.*	*FY 2014 Allowance*	*Percent Change*	*DLS Recommd.*
Public Safety Communication System	$10.000	$35.250	$29.100	-17.4%	$29.100
One Maryland Broadband Network	49.563	56.678	11.038	-80.5%	11.037
Total	**$59.563**	**$91.928**	**$40.138**	**-56.3%**	**$40.137**

For further information contact: Patrick S. Frank Phone: (410) 946-5530

Summary of Issues

Providing In-building Coverage for the Public Safety Communications System Substantially Increases Costs: The *Capital Improvement Program* (CIP) includes sufficient funds for on-street coverage. Funds for in-building coverage are not in the CIP. **The department should brief the committees on the issues and costs related to enhancing the system to provide in-building coverage.**

Will the One Maryland Broadband Project Be Ready on Time? The federal government requires that the funds for this project are spent by August 31, 2013. **The department should brief the committees on the progress of the One Maryland Broadband project. This should include a discussion of concerns related to failing to complete the project by August 31, 2013.**

Status of One Maryland Broadband Project Resource Sharing Agreements: The State will need to enter into resource sharing agreements with most counties. **The department should brief the committee on the status of the resource sharing agreements.**

Summary of Recommended PAYGO Actions

1. Concur with Governor's allowance.

Summary of Recommended Bond Actions

1. Public Safety Communications System

   Approve.

2. One Maryland Broadband Network

   Approve.

Program Description

Public Safety Communications System: The Public Safety Communications System project will provide an integrated statewide public safety wireless communication system and provide a primary radio communication system for public safety first responders throughout the State. The system uses the Public Safety 700 Megahertz (MHz) spectrum licensed to the State by the Federal Communications Commission. Once completed, this radio system will be the primary operating radio system for all State agencies, providing a communications platform for 16 State operating units and allowing for seamless interoperability among State users and first responders at all levels of government. Interoperable communications is the ability for first responders to transmit voice and data communications in real-time regardless of agency or jurisdictional boundary. When communications systems are interoperable, police and firefighters responding to a routine incident or a catastrophic emergency can talk to and share information with each other to coordinate efforts and work effectively together.

One Maryland Broadband: The One Maryland Broadband project constructs additional fiber optic lines to connect government and private broadband networks. The network will connect lines to anchor institutions, such as schools, libraries, hospitals, and public safety agencies. The benefits of the system are improved access, increased bandwidth, and reduced operating costs. In addition to the Department of Information Technology (DoIT), the Inter-County Broadband Network (ICBN) and Frederick County are also managing part of the network's construction. ICBN is led by Howard County and also includes Anne Arundel, Baltimore, Carroll, Harford, Montgomery, and Prince George's counties, the city of Annapolis, and Baltimore City. ICBN has been identified as a subrecipient of the grant and will be managing the construction of the network in Central Maryland. Frederick County government will be managing its own county's construction.

Program Performance Measures and Outputs

Public Safety Communications System Project Status and Costs

The construction contract was awarded by the Board of Public Works in November 2010. The project includes the following phases:

- Region 1A provides service in the area served by the Maryland Transportation Authority. This became operational in December 2012.

- Region 2 services the Eastern Shore (Caroline, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester counties). Construction has begun, and the area is expected to be operational by December 2013.

- Region 1 serves Central Maryland (Anne Arundel, Baltimore, Carroll, Cecil, Frederick, Harford, and Howard counties and Baltimore City). Construction is scheduled in fiscal 2014. As with previous regions, planning will begin while Region 2 is under construction to keep the project on schedule.

- Region 3 provides service to the Washington, DC suburbs (Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties). Construction is scheduled in fiscal 2015. As with previous regions, planning will begin while Region 1 is under construction to keep the project on schedule.

- Region 4 completes the project by providing service to Western Maryland (Allegany, Garrett, and Washington counties). Construction is scheduled in fiscal 2016. As with previous regions, planning will begin while Region 3 is under construction to keep the project on schedule.

The current funding plan provides funds to support on-street service across 95% of Maryland. **Exhibit 1** shows that the project's capital costs total $322 million. Out-year costs budgeted in the State's CIP total $122 million in fiscal 2015, 2016, and 2017. The out-year cost estimates provide $111 million in general obligation (GO) bonds and another $11 million in nonbudgeted costs.

Exhibit 1
Public Safety Communications (700 MHz) System
Capital Costs Required to Provide On-street Coverage
($ in Millions)

	Prior Authorizations	Current Request	Anticipated Requests	Total
Acquisition	$0.1	$0.0	$0.0	$0.1
Planning	2.8	0.0	0.0	2.8
Construction	74.8	9.5	57.2	141.6
Equipment*	92.6	19.6	65.1	177.3
Total	**$170.3**	**$29.1**	**$122.3**	**$321.7**

* Capital equipment only, does not include operating equipment such as radios.

Source: Department of Budget and Management, January 2013

Since last year, total costs have increased by $39 million. **Exhibit 2** shows that the source of the costs are adjusting the contract to reflect inflation, requiring additional site enhancements, and requiring additional backhaul upgrades. The 2010 Motorola contract includes a provision that allows the vendor to adjust the price based on the Consumer Price Index, and the costs have now been added to the project costs. Construction from Region 1A revealed that additional site work, such as adding equipment shelters, would be required. Backhaul refers to the intermediate link between the system's core (which serves the customers) and the system's backbone. Upgrades in the existing fiber optic and microwave backhaul systems are required to connect each site to the new system.

Exhibit 2
Public Safety Communication System Cost Increases Since Last Year
($ in Millions)

Cost Increase	
Total Fiscal 2013 *Capital Improvement Program* (CIP) Costs	$283.2
Total Fiscal 2014 CIP Costs	321.7
Total Cost Increase	**$38.5**
Source of Cost Increase	
Adjust Contract to Reflect the Consumer Price Index	$13.9
Site Enhancements in Regions 1, 3, and 4	7.8
Backhaul Upgrades in Regions 1, 3, and 4	8.8
Backhaul Upgrades in Regions 1A and 2	8.1
Total Cost Increase	**$38.5**

Note: Numbers may not sum to total due to rounding.

Source: Department of Budget and Management, January 2013

The State also needs to increase the share of GO funding by $12 million. This is attributable to a commitment from the State Highway Administration (SHA), who require additional funds to purchase equipment and enhance existing communications systems.

One Maryland Broadband Project Status and Costs

The project is scheduled to be completed by August 31, 2013. Because federal funds will no longer be available after August 31, 2013, the State must complete the project by that date. DoIT advises that delays could result in a loss of federal funds.

The permitting process for this project is quite extensive. DoIT must receive permits from SHA for rights of ways along roads from 24 county and Baltimore City Departments of Public Works (DPW), from several municipal DPWs, from the Maryland Department of the Environment for tidal crossings and wetlands, and from the U.S. Army Corps of Engineers for tidal crossings.

The bulk of the project's costs ($163 million) support construction ($118 million) and equipment ($43 million) costs. In-kind contributions provide much of the support for administrative costs. To reduce the time it takes to complete the project, engineering is done concurrently in sections and continuously throughout the life of the project. Essentially, the State engineers a section, submits permits, and then begins to engineer another section. Under this approach, permitting and engineering is done almost continuously.

Exhibit 3 shows that federal funds provide $115.0 million of the $163.0 million in project costs. In-kind contributions, which are primarily for appraised assets, are the smallest source of funds. Since last year, the State has increased its in-kind contribution by $4.4 million, primarily due to a higher rate applied to the State's in-kind fiber included in this project.

Exhibit 3
One Maryland Broadband Network Spending by Fund
($ in Millions)

	Spent as of September 30, 2012	Spent after September 30, 2012	Total
Federal Funds	$71.0	$44.3	$115.2
State Cash/Bond Match	5.9	8.7	14.5
Subrecipient Cash Match	13.7	6.2	19.8
State In-kind	4.2	2.9	7.1
Subrecipient In-kind	3.3	2.9	6.1
Total	**$98.0**	**$64.8**	**$162.8**

Source: Department of Information Technology, January 2013

DoIT advises that construction is well under way. Two events did slow construction in 2012. DoIT estimates that Hurricane Sandy in October and June's El Derecho storm slowed the schedule by seven weeks. Nonetheless, work is scheduled to be completed by the end of July 2013.

Exhibit 4 shows that by fall 2012, 897 miles had been constructed.

Exhibit 4
One Maryland Broadband Project Progress

	Completed	Total Planned	Percent Completed
Underground Miles	897	1,042	86%
Aerial Miles	177	318	56%
Total Miles	1,074	1,360	79%
Community Anchor Institutions Connected	294	1,006	29%

Source: Department of Information Technology, January 2013

In addition to the indicators shown above, DoIT is regularly providing status reports for this project. These include quarterly reports filed with the federal government, as well as regular Statestat and Broadband Stat meetings. The Department of Legislative Services receives these reports. According to these reports:

- Legal agreements to construct the network with all county governments have been completed.
- Legal agreements with all nine utilities for aerial attachments (Baltimore Gas and Electric, PEPCO, Verizon, Alleghany Power, Delmarva, Choptank, Berlin Electric, and Hagerstown Light) have been completed. Make ready payments have been made for 96% of aerial routes.
- Legal agreements for each railroad crossing have been completed. Applications have been made for all 60 crossings, and 41 have been executed.
- Contracts for fiber, materials, logistics, engineering services, and construction have been awarded.

Capital Improvement Program

Capital Improvement Program
($ in Millions)

Program	*2012 Approp.*	*2013 Approp.*	*2014 Request*	*2015 Estimate*	*2016 Estimate*	*2017 Estimate*	*2018 Estimate*
Public Safety Communications System	$10.000	$35.250	$29.100	$49.100	$38.700	$34.500	$0.000
One Maryland Broadband Network	49.563	56.678	11.038	0.000	0.000	0.000	0.000
Total	**$59.563**	**$91.928**	**$40.138**	**$49.100**	**$38.700**	**$34.500**	**$0.000**

Fund Source	*2012 Approp.*	*2013 Approp.*	*2014 Request*	*2015 Estimate*	*2016 Estimate*	*2017 Estimate*	*2018 Estimate*
PAYGO FF	$43.763	$51.678	$9.838	$0.000	$0.000	$0.000	$0.000
GO Bonds	15.800	30.250	23.500	42.300	34.300	34.500	0.000
Nonbudgeted Funds	0	10.000	6.800	6.800	4.400	0.000	0.000
Total	**$59.563**	**$91.928**	**$40.138**	**$49.100**	**$38.700**	**$34.500**	**$0.000**

Issues

1. Providing In-building Coverage for the Public Safety Communications System Substantially Increases Costs

The CIP provides GO bond and nonbudgeted funds for this project through fiscal 2017. These funds are sufficient to provide on-street coverage for 95% of the State. The level of coverage budgeted does not provide complete in-building coverage.

DoIT has developed plans to upgrade the 700 MHz system so that it also provides in-building coverage. After the system is deployed in fiscal 2016, the system will be evaluated to determine the level of in-building coverage and what additional construction is necessary to complete in-building coverage. For buildings that do not have sufficient coverage, the State can build additional towers near those buildings or add antennas to those buildings to provide in-building coverage. Initial estimates expect 400 towers will be required to provide in-building coverage. This is more than twice as many as is required for on-street coverage.

In 2012, testing region 1A began. DoIT advises that, in general, coverage using the 700 MHz spectrum is proving to be slightly better than prediction modeling showed. Specifically, the in-building penetration is better than the modeling suggests. This experience was used to adjust some of the site locations in Phase 2. This could also result in reducing the cost of enhancing the system to provide in-building coverage. **The department should brief the committees on the issues and costs related to enhancing the system to provide in-building coverage.**

2. Will the One Maryland Broadband Project Be Ready on Time?

The federal government requires that the funds for this project are spent by August 31, 2013. DoIT advises that through August 2013, the project costs will need to be $65 million or 40% of the cost to meet this objective. The project was delayed for seven weeks in 2012 because of Hurricane Sandy and the El Derecho storm. It will take a considerable amount of organization and effort to complete the project by August 31, 2013.

There was also a requirement that two-thirds of the project's funds be expended by August 31, 2012. DoIT advises that the State spent $64 million through August 2012. This was less than the mandate, but the National Telecommunications and Information Administration, which is in the U.S. Department of Commerce and administers federal broadband grants, was satisfied with the State's progress and did not penalize the State. This suggests that if the State continues to make progress and narrowly misses the objective, the State may not be penalized. On the other hand, fiscal austerity at the federal level could result in a strict interpretation of this requirement and a loss of federal funds if the State does not meet the August 2013 deadline.

The department should brief the committees on the progress of the One Maryland Broadband project. This should include a discussion of concerns related to failing to complete the project by August 31, 2013.

3. Status of One Maryland Broadband Project Resource Sharing Agreements

Since the project involves State and local governments using the assets built, the State will need to enter into resource sharing agreements. Agreements will need to be made with Baltimore City and counties, except Dorchester, Frederick and Talbot. In these three counties, the State will not be using any of their assets. DoIT advises that the State has made progress, but that no agreements have yet been signed. **The department should brief the committee on the status of the resource sharing agreements.**

PAYGO Recommended Actions

1. Concur with Governor's allowance.

GO Bond Recommended Actions

1. Approve $22,300,000 in general obligation bonds for the Public Safety Communications System.

2. Approve $1,200,000 in general obligation bonds for the One Maryland Broadband project.

Executive's Operating Budget Impact Statement

($ in Millions)

	FY 2014	*FY 2015*	*FY 2016*	*FY 2017*	*FY 2018*
Estimated Operating Cost	$13.535	$11.262	$20.446	$4.019	$4.102
Estimated Staffing	1	1	1	1	1

Most of the operating impacts reflect the cost of the radios to be purchased.